

FIG.1

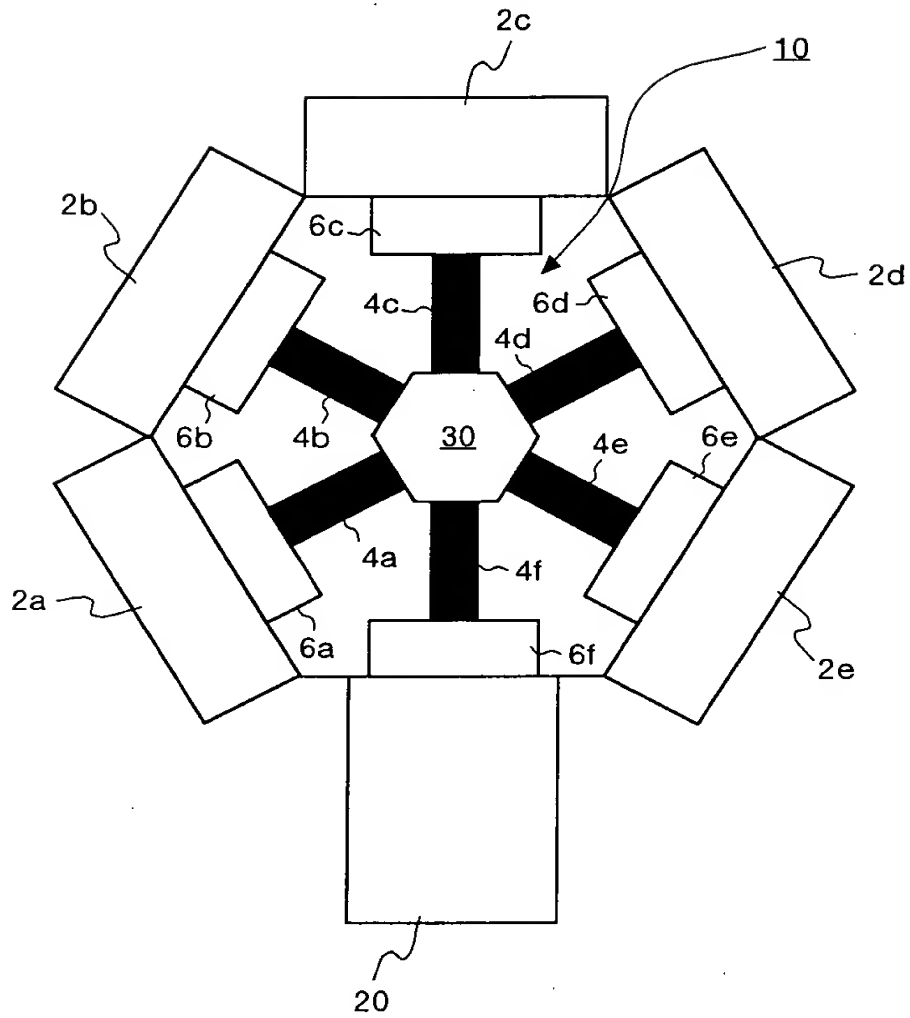


FIG.2

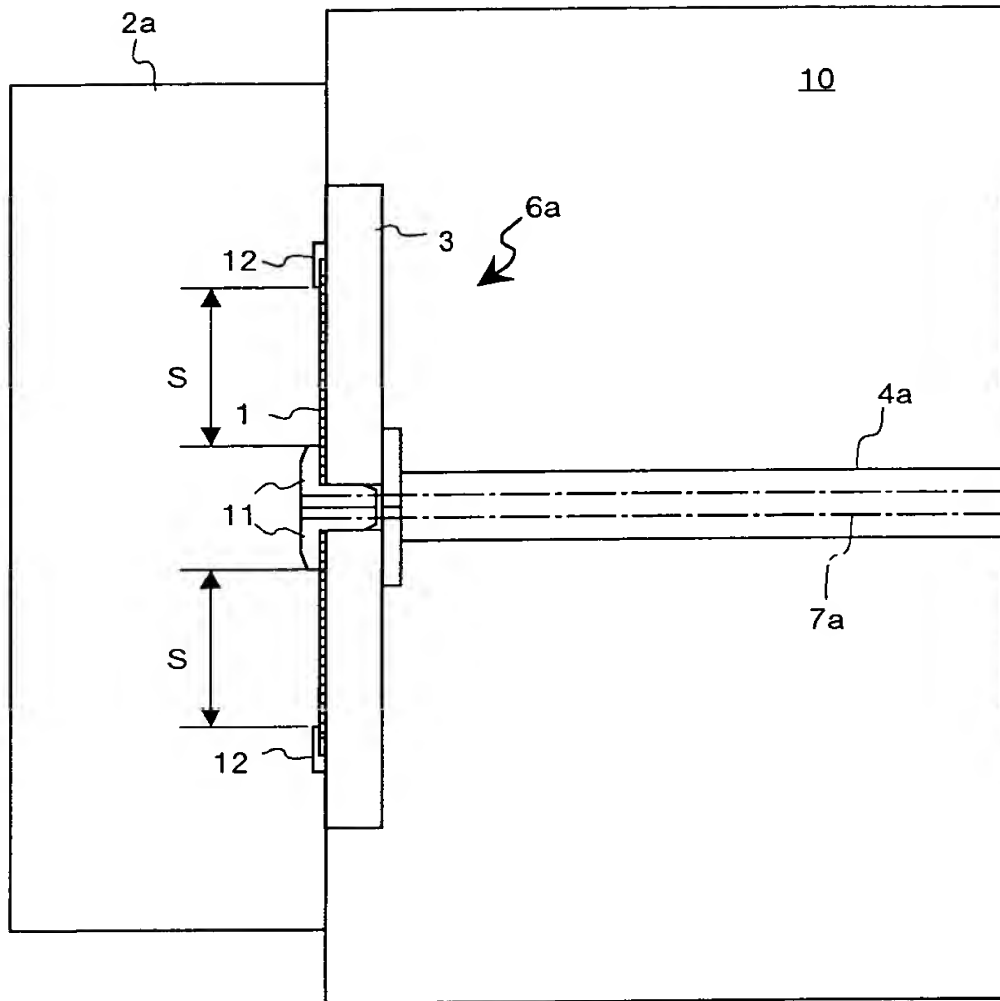


FIG.3

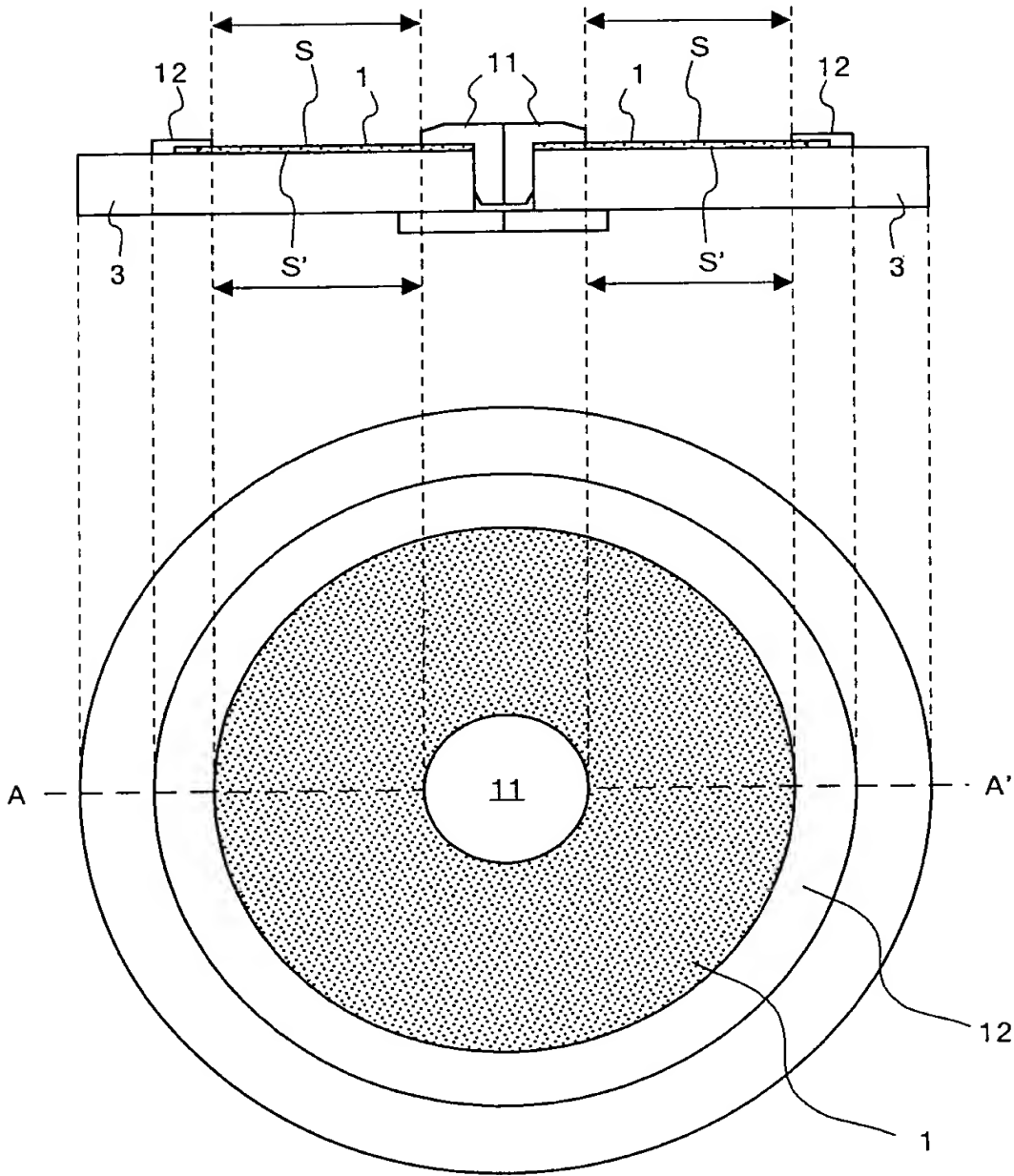
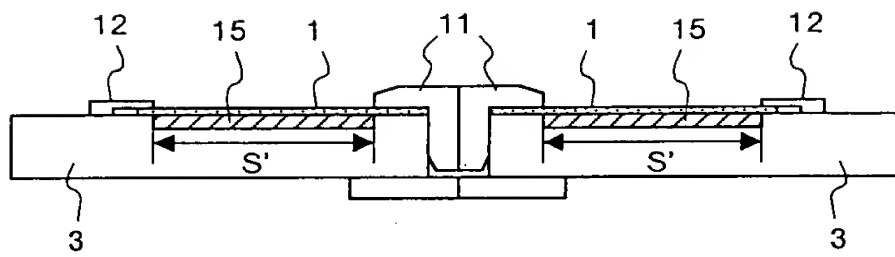
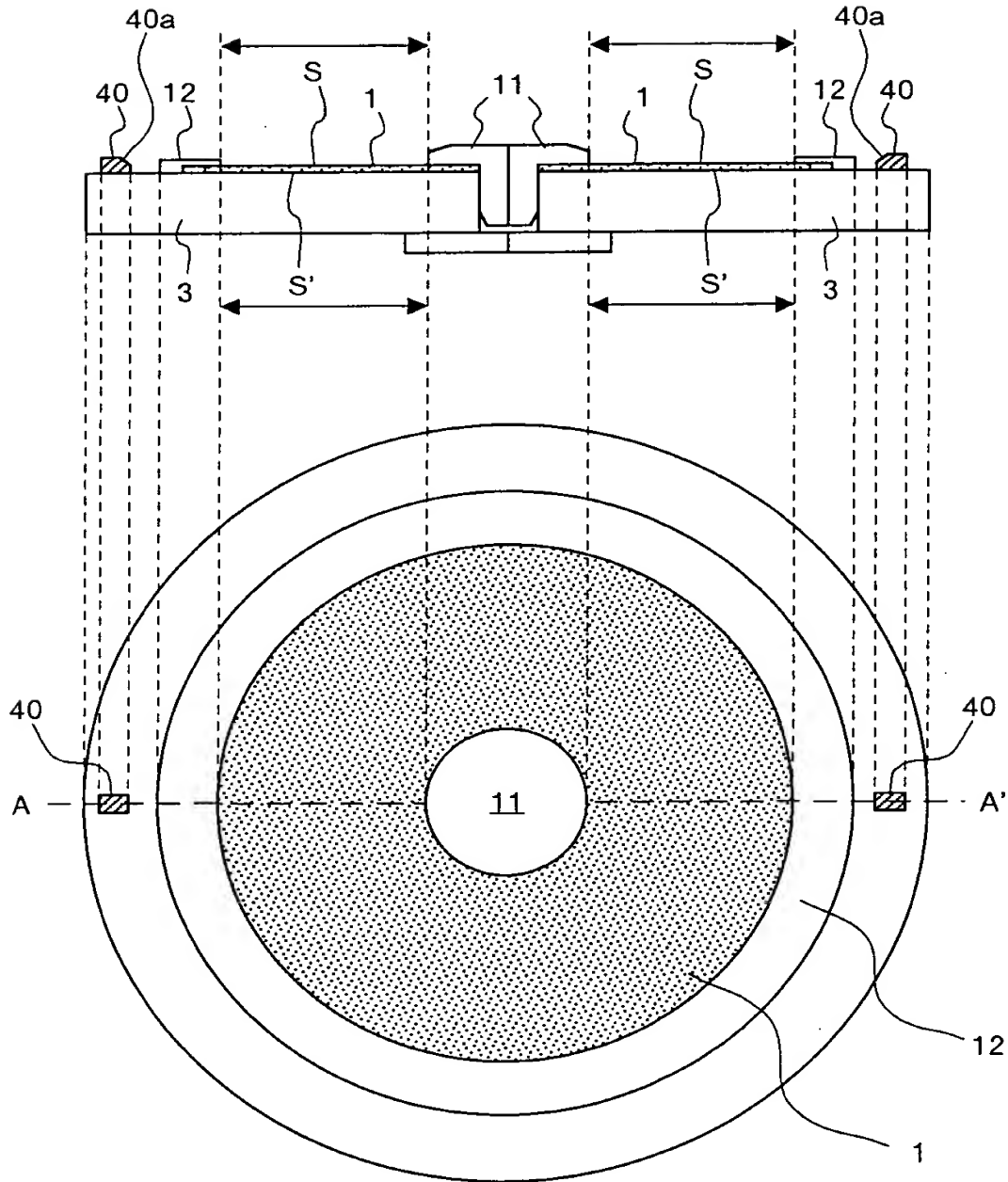


FIG.4



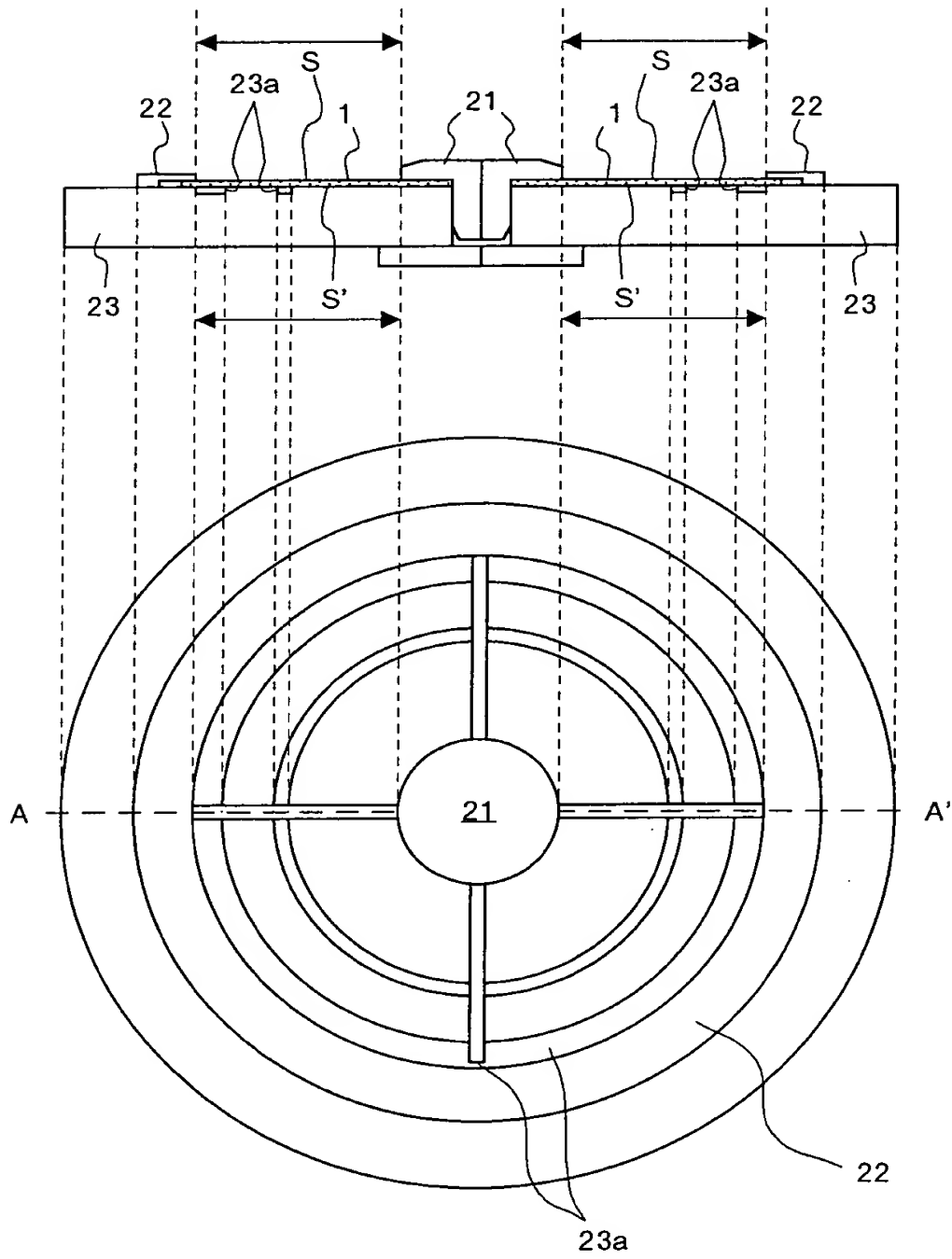
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FIG.5



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FIG.6



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FIG.7

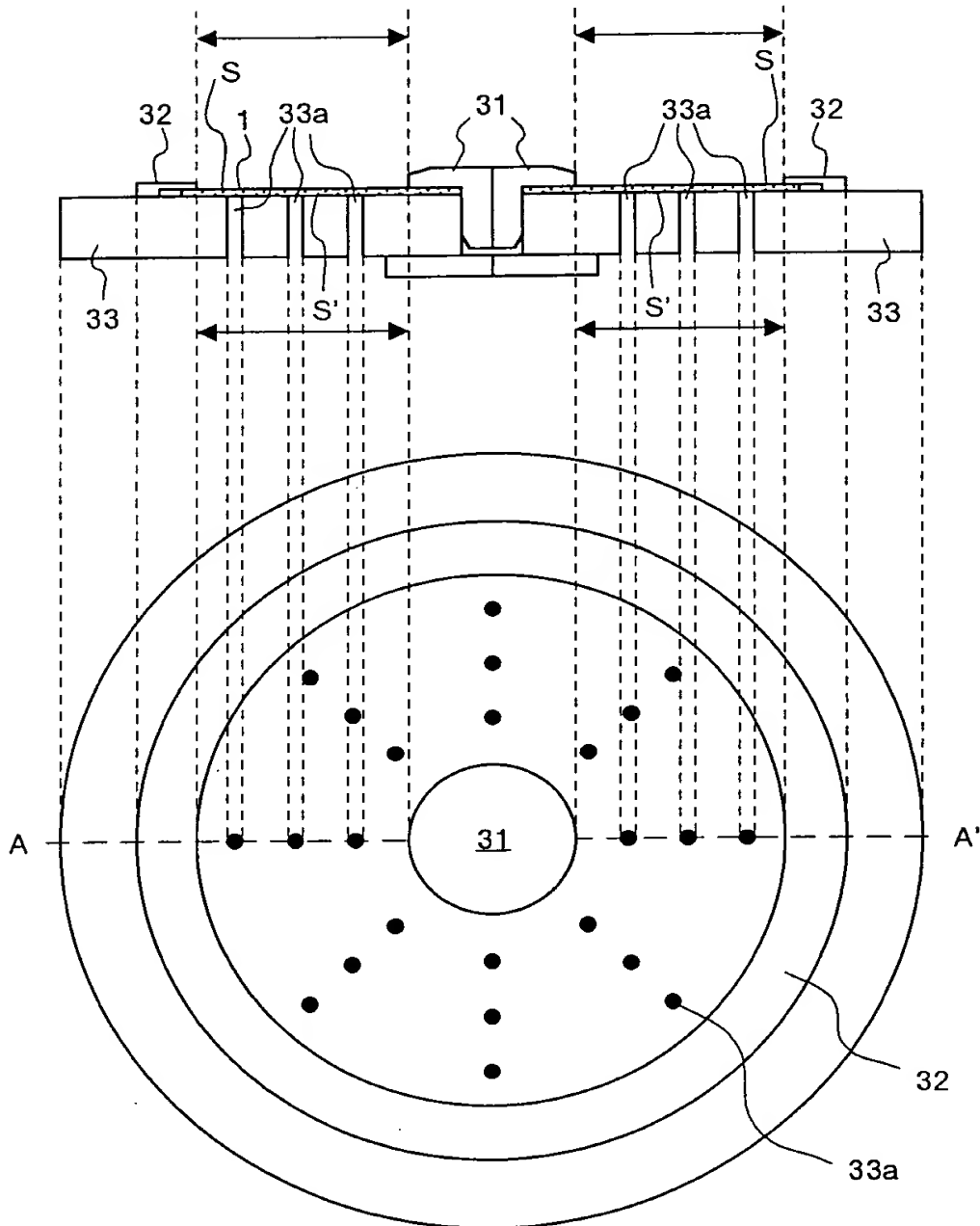
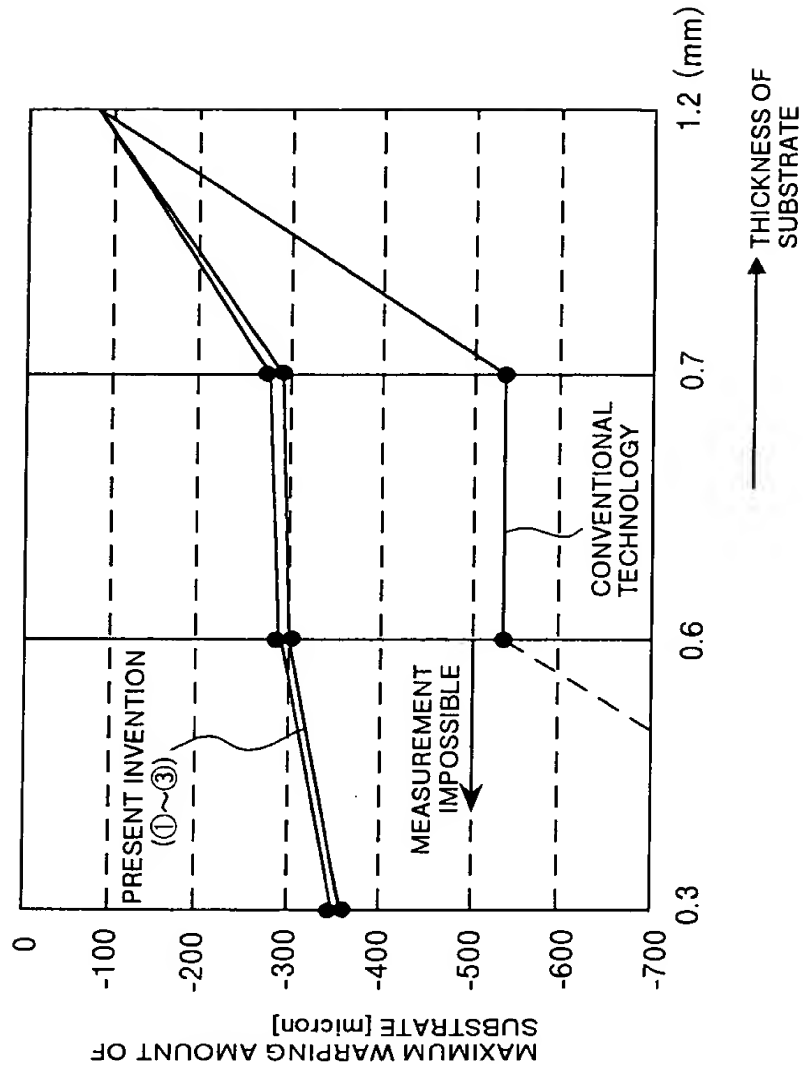


FIG.8

MAXIMUM WARPING AMOUNT OF SUBSTRATE [μ m]	THICKNESS OF SUBSTRATE			
	0.3mm	0.6mm	0.7mm	1.2mm
CONVENTIONAL TECHNOLOGY	MEASUREMENT IMPOSSIBLE	-550	-540	-100
EMBODIMENT①	-350	-300	-290	-90
EMBODIMENT②	-340	-290	-280	-85
EMBODIMENT③ -1	-340	-290	-280	-85
EMBODIMENT③ -2	-350	-300	-290	-90

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FIG.9



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FIG.10

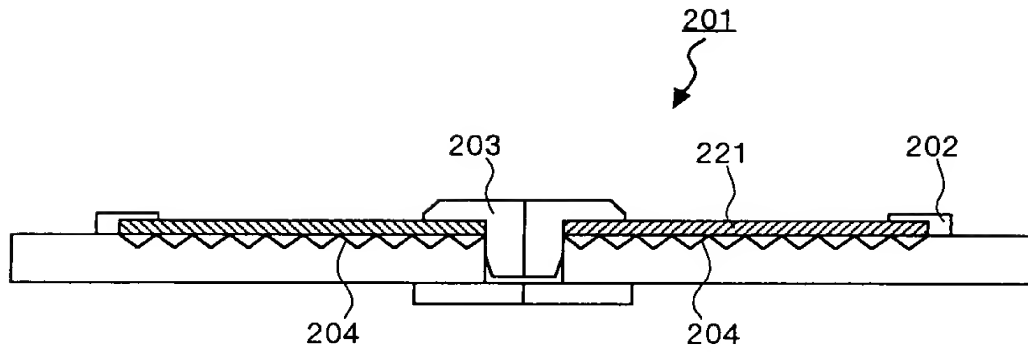
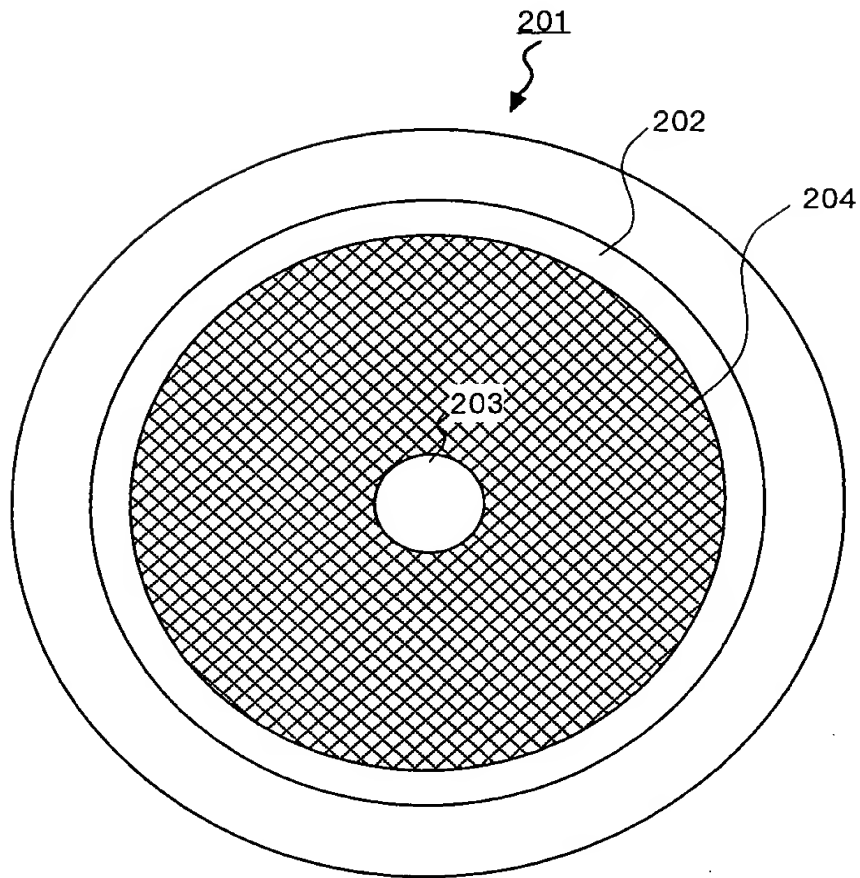


FIG.11



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FIG.12

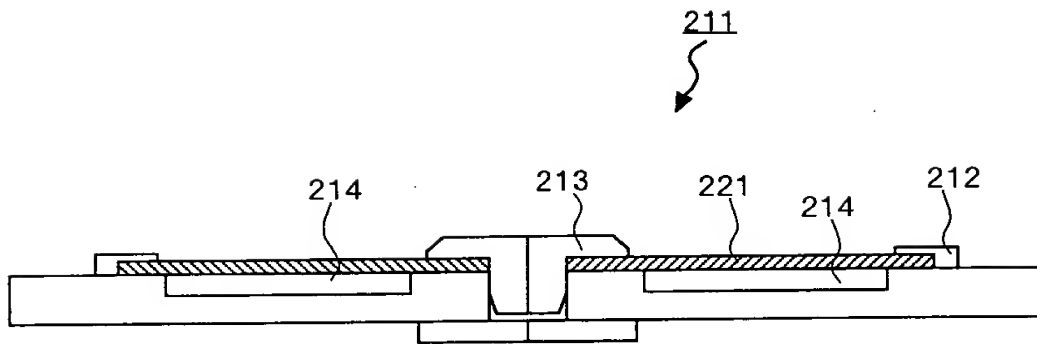
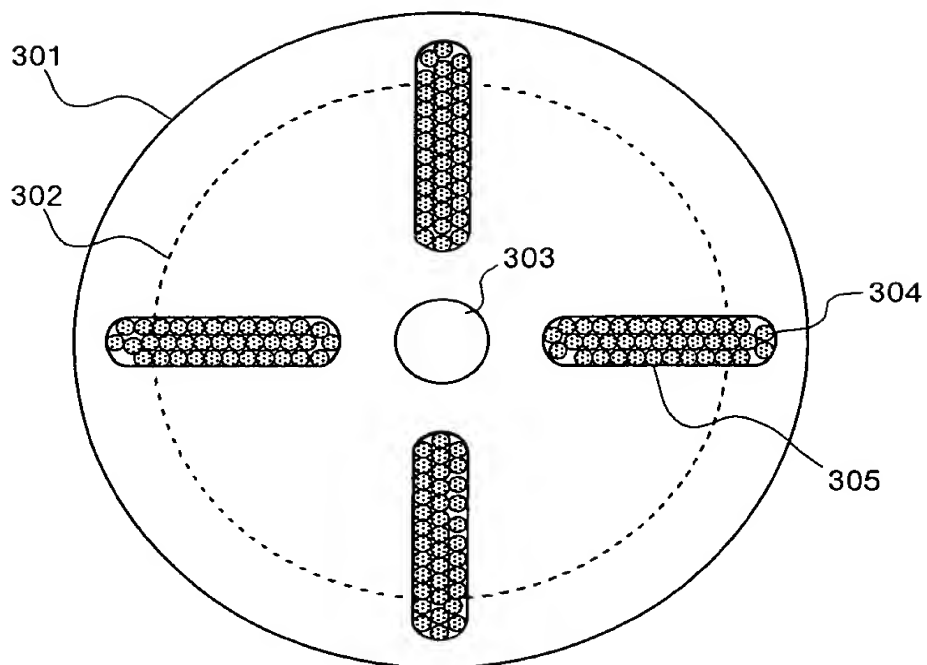


FIG.13



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FIG.14

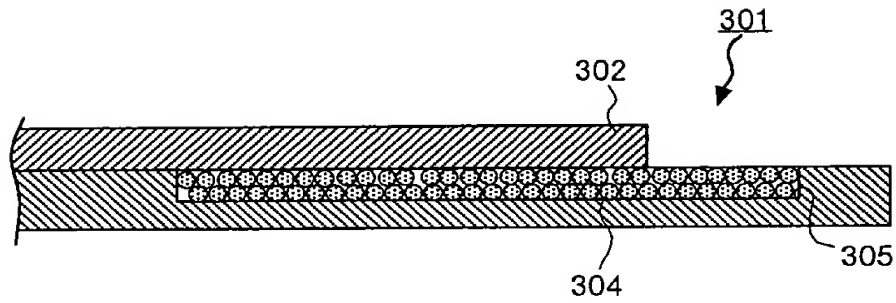


FIG.15

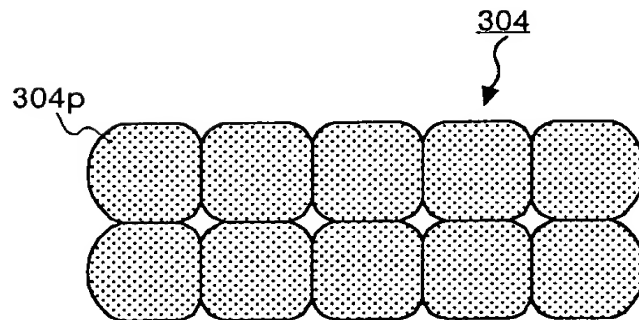


FIG.16

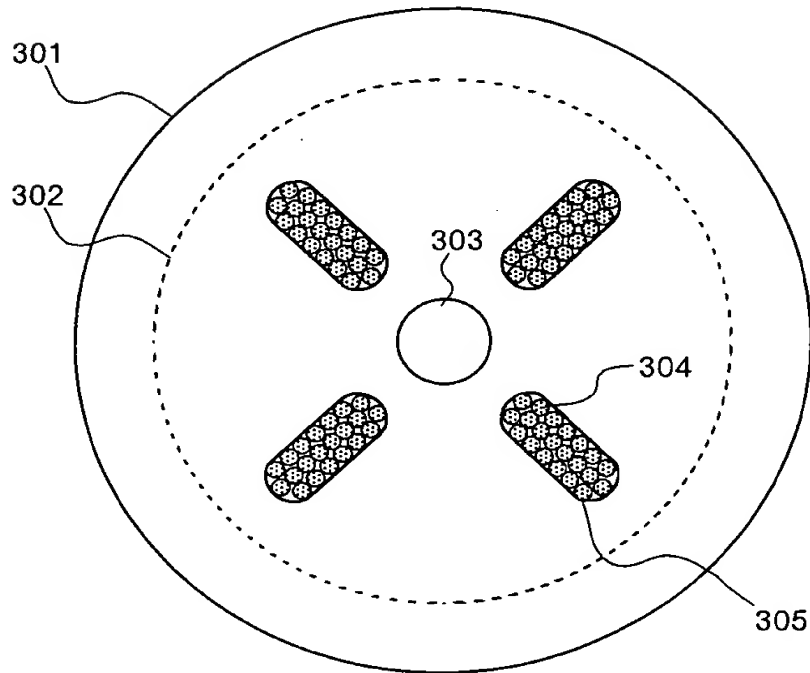


FIG.17

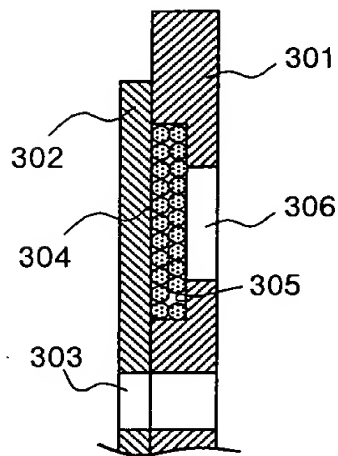


FIG.18

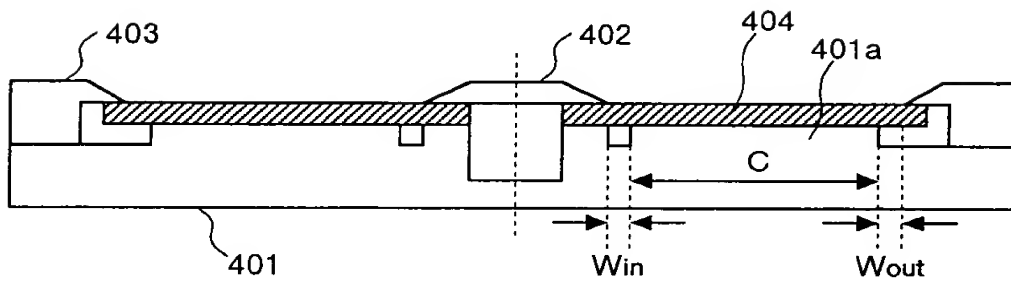
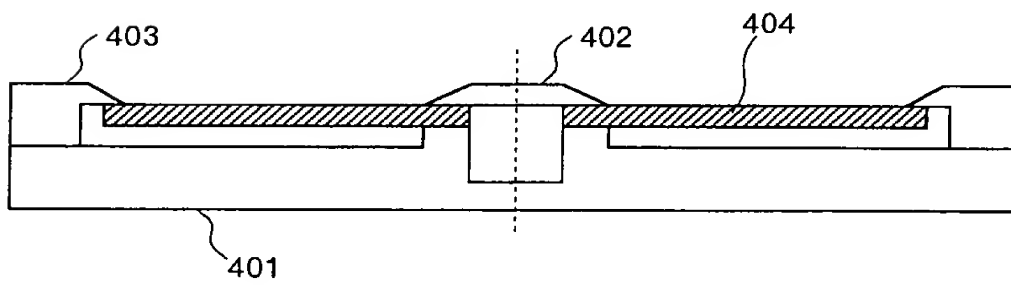
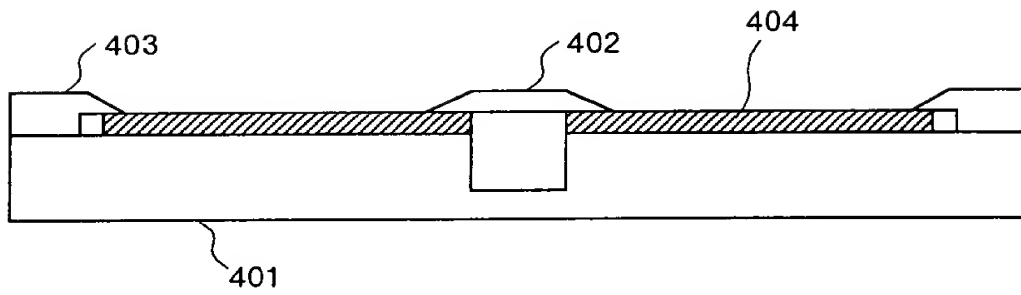


FIG.19



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FIG.20



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FIG.21

SUBSTRATE OR FILM-FORMED LAYER	MATERIAL	THICKNESS
REFLECTION LAYER	Al ALLOY	160nm
UPPER BASE PROTECTION LAYER	ZnS·SiO ₂	30nm
RECORDING LAYER	Ag-In-Sb-Te	20nm
LOWER BASE PROTECTION LAYER	ZnS·SiO ₂	180nm
SUBSTRATE	POLYCARBONATE	0.6mm

FIG.22

TYPES OF SUBSTRATE HOLDER	WARPING RATE OF SUBSTRATE (μm)
SUBSTRATE HOLDER SHOWN IN FIG.18	100
SUBSTRATE HOLDER SHOWN IN FIG.19	>400
SUBSTRATE HOLDER SHOWN IN FIG.20	100

FIG.23

NO.	WIDTH W _{in} FROM AN INNER MASK TO A SUBSTRATE HOLDER EDGE (mm)	WIDTH W _{out} FROM AN INNER MASK TO A SUBSTRATE HOLDER EDGE (mm)	WARPING AMOUNT OF THE SUBSTRATE (μ m)	A NUMBER OF UNSUCCESSFULLY LOADED SUBSTRATES AMONG 100 SHEETS CONTINUOUSLY FORMED
1	4	1	100	0
2	4	0	100	20
3	4	0.5	100	0
4	4	3	100	0
5	4	5	100	0
6	4	6	150	0
7	4	7	200	0
8	1	1	100	20
9	2	1	100	0
10	5	1	100	0
11	7	1	100	0
12	10	1	100	0
13	11	1	120	0
14	12	1	150	0

FIG.24

NO.	TAPER ANGLE θ IN SUBSTRATE HOLDER EDGE (deg.)	WARPING AMOUNT OF THE SUBSTRATE (μm)	PRESENCE OF A DAMAGE ON A SUBSTRATE CAUSED BY SUBSTRATE HOLDER EDGE SECTION
15	0	100	YES
16	0.5	100	YES
17	1.0	100	NO
18	1.5	100	NO
19	2.0	100	NO
20	2.5	150	NO
21	3.0	200	NO

FIG.25

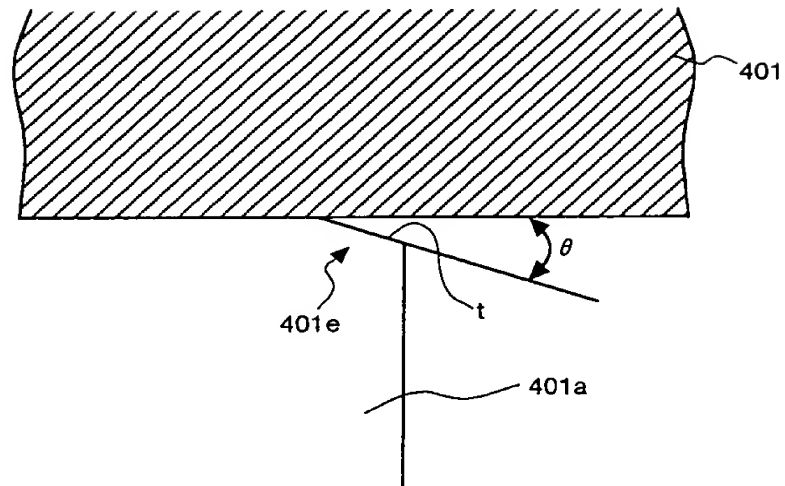


FIG.26

NO.	WIDTH H OF SILICON RUBBER IN SUBSTRATE HOLDER EDGE (mm)	WARPING RATE OF A SUBSTRATE (μ m)	PRESENCE OF A DAMAGE ON A SUBSTRATE CAUSED BY SUBSTRATE HOLDER EDGE SECTION
22	0	100	YES
23	0.1	100	NO
24	0.3	100	NO
25	0.5	100	NO
26	0.6	120	NO
27	0.7	150	NO

FIG.27

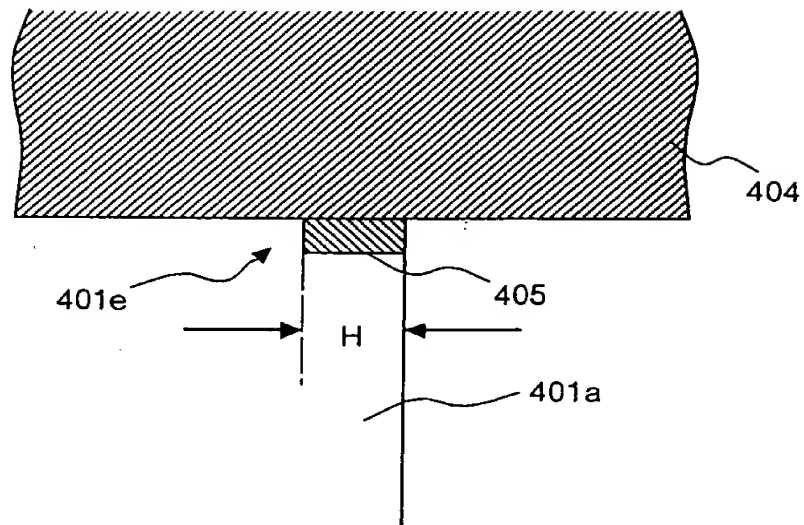
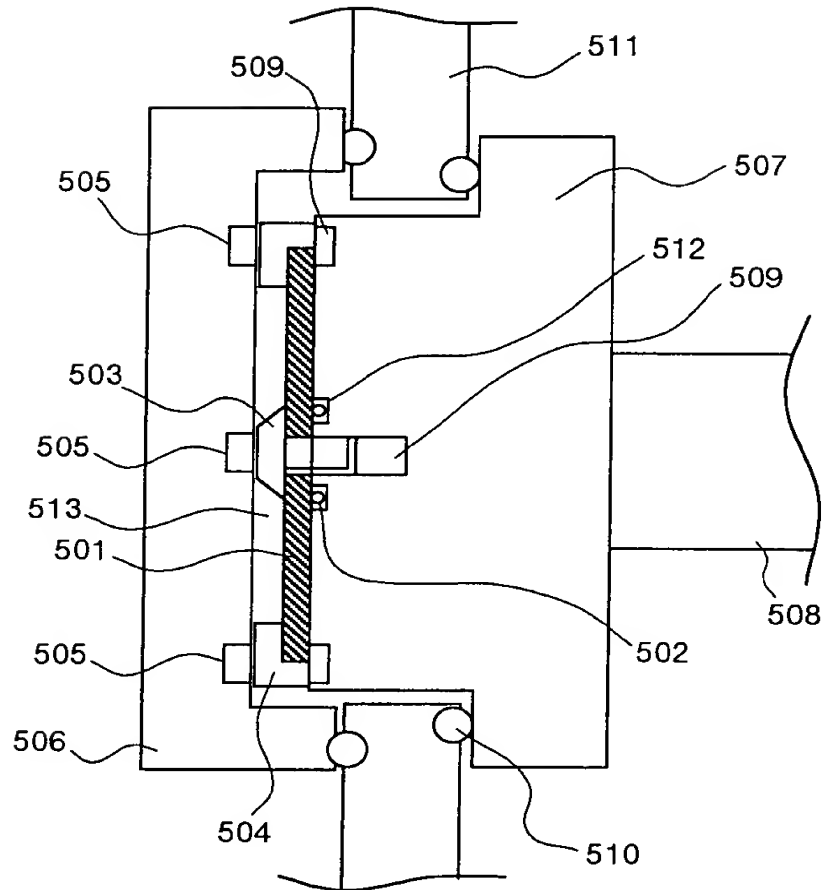


FIG.28



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FIG.29

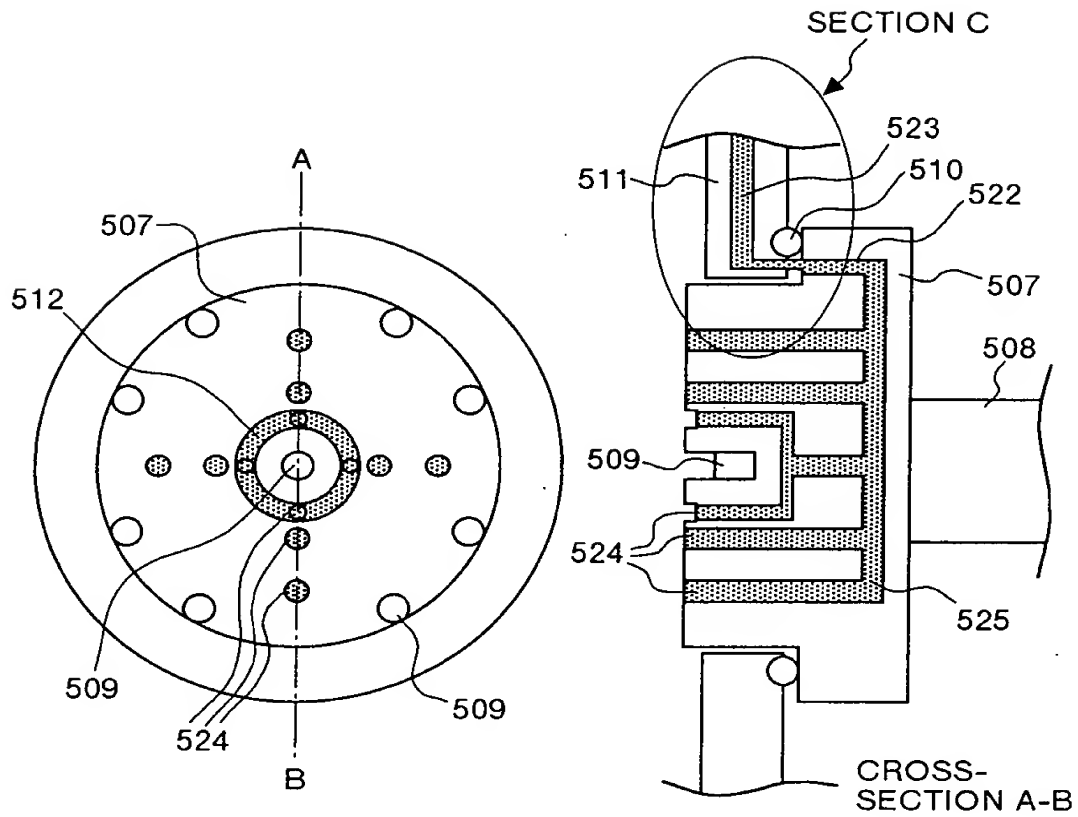


FIG.30

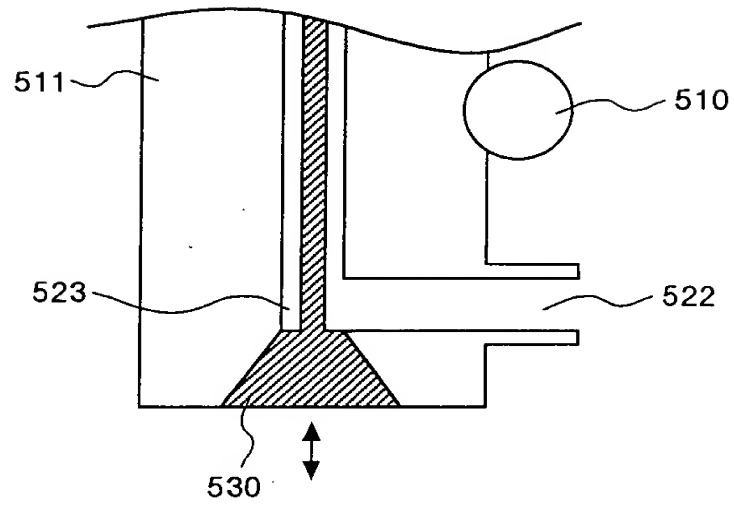


FIG.31

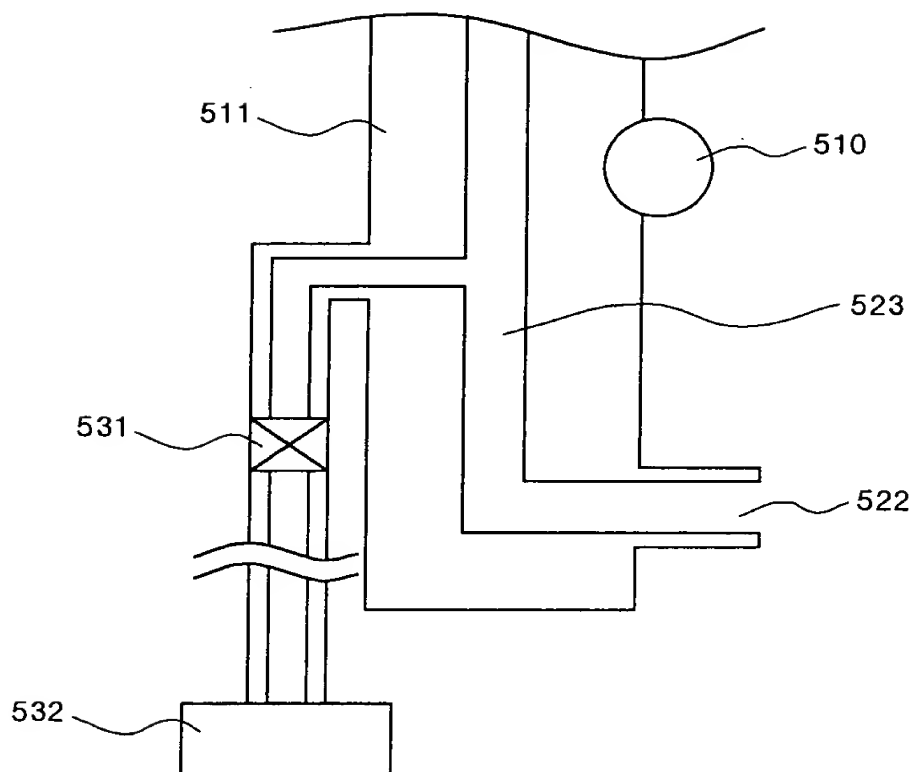
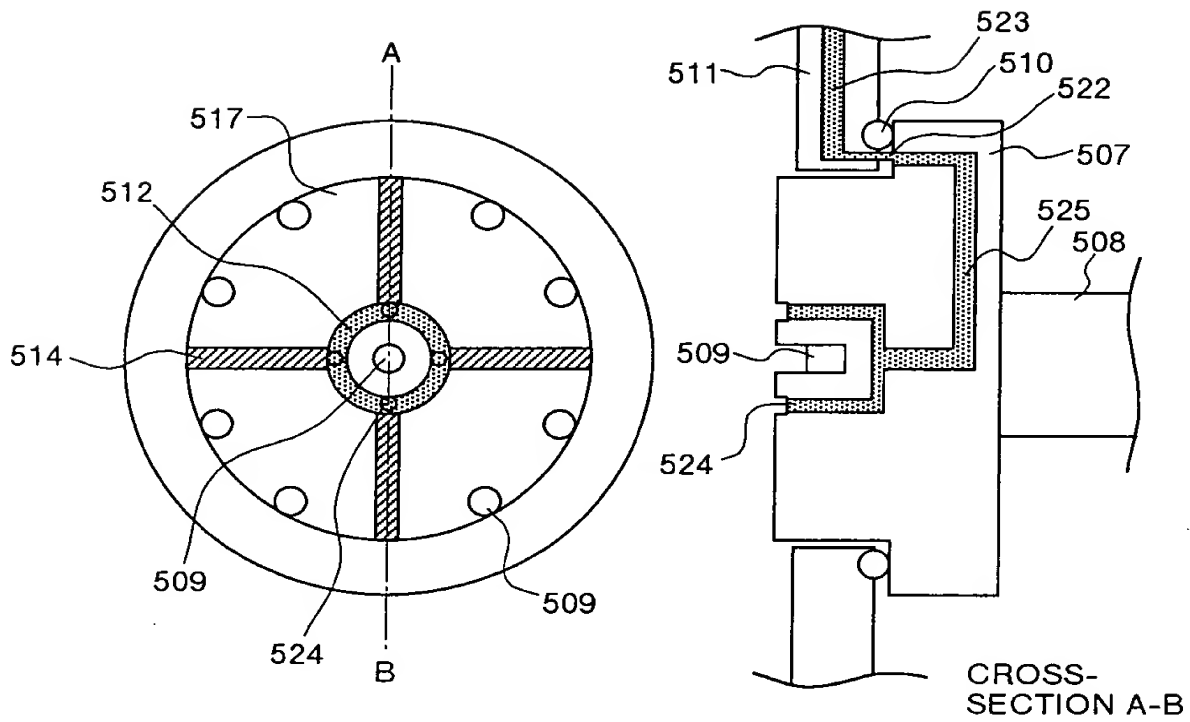
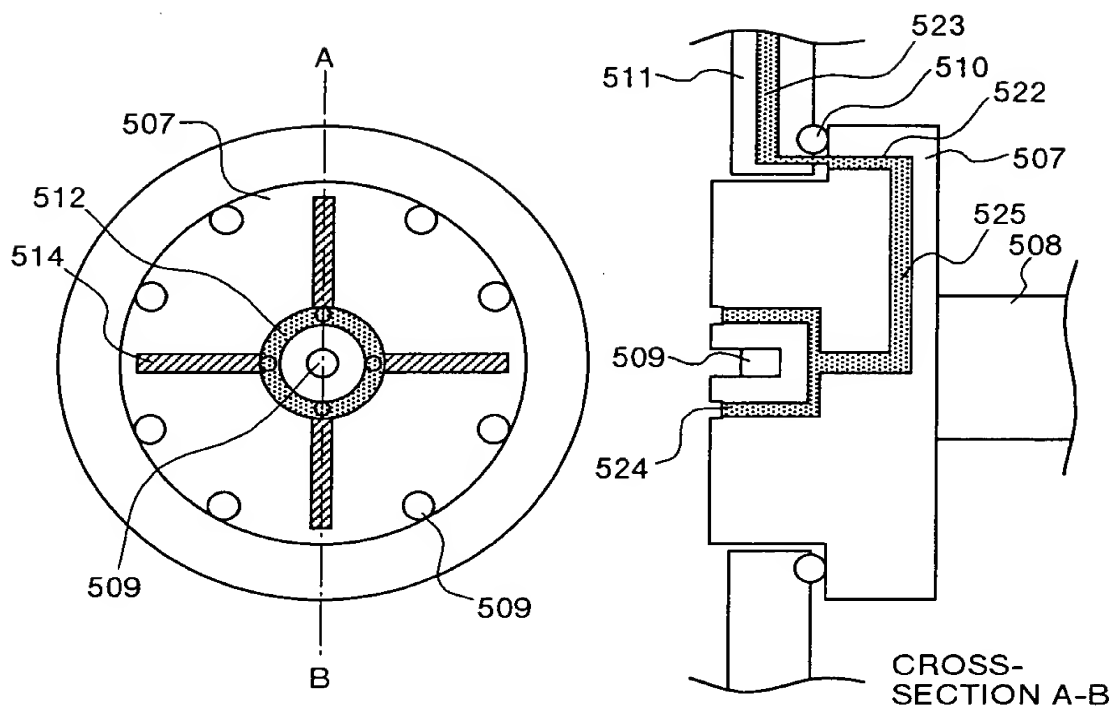


FIG.32





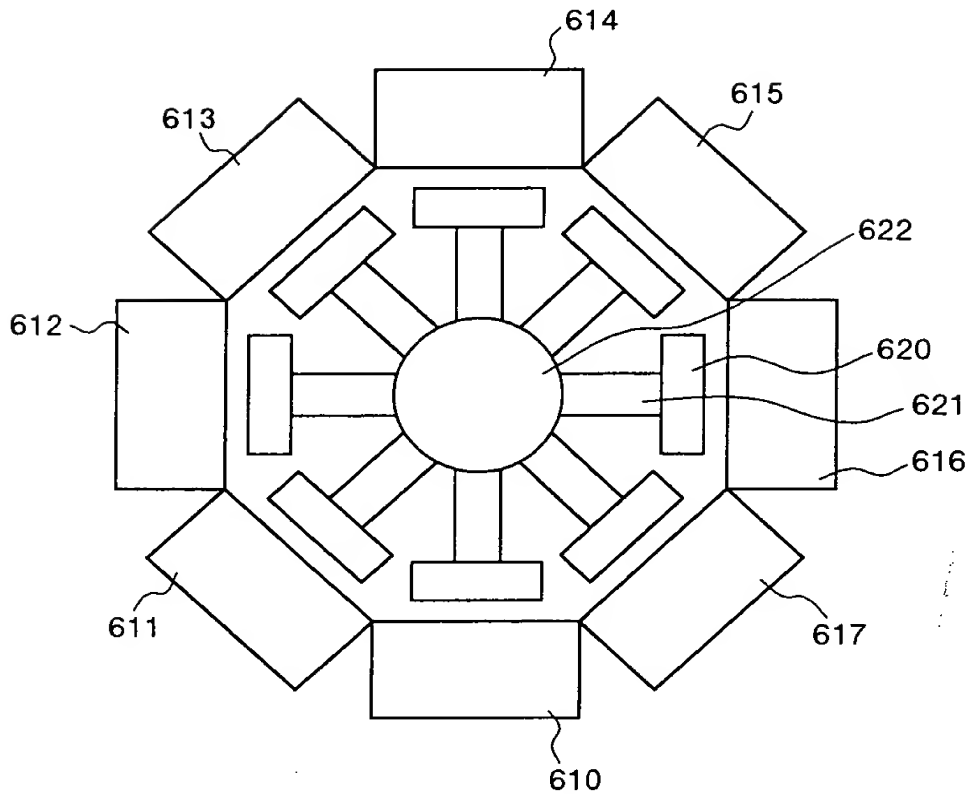


FIG.35

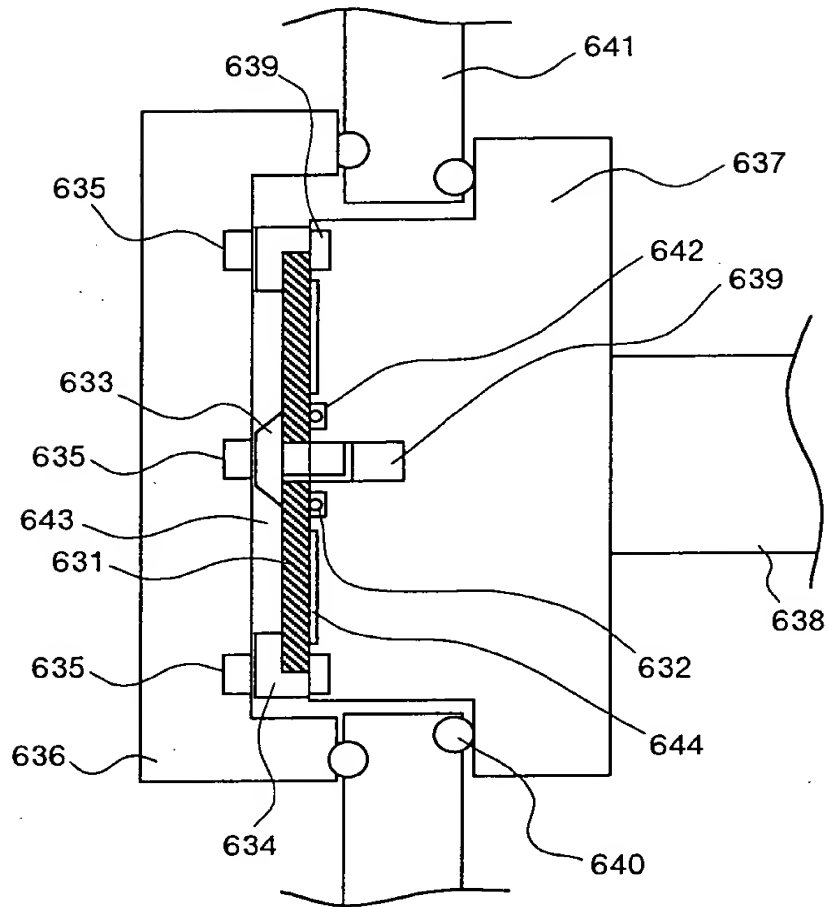


FIG.36

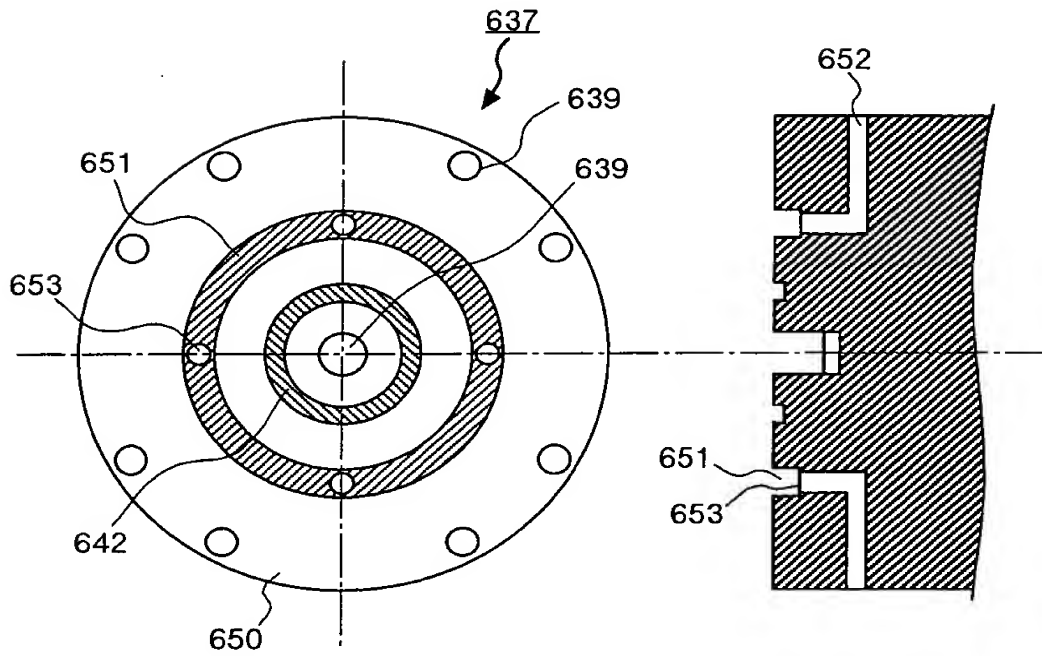


FIG.37

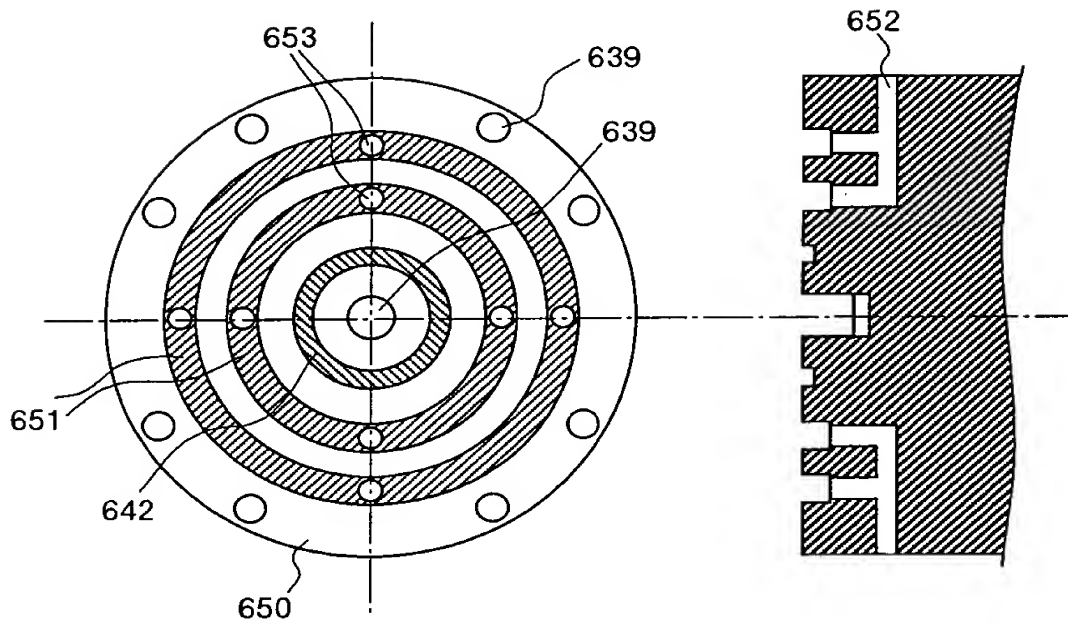


FIG.38

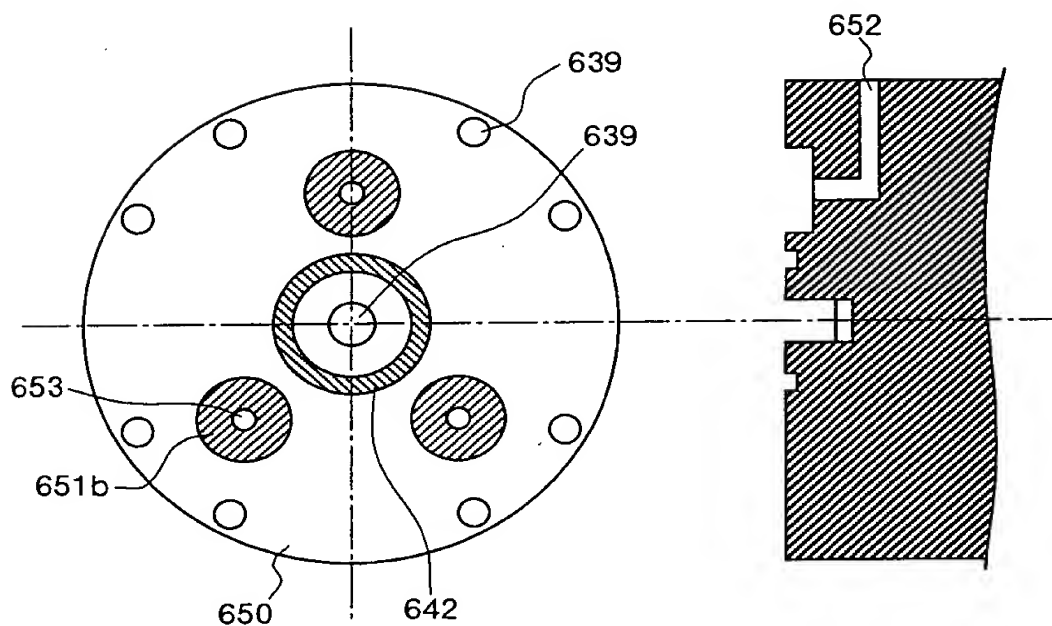


FIG.39

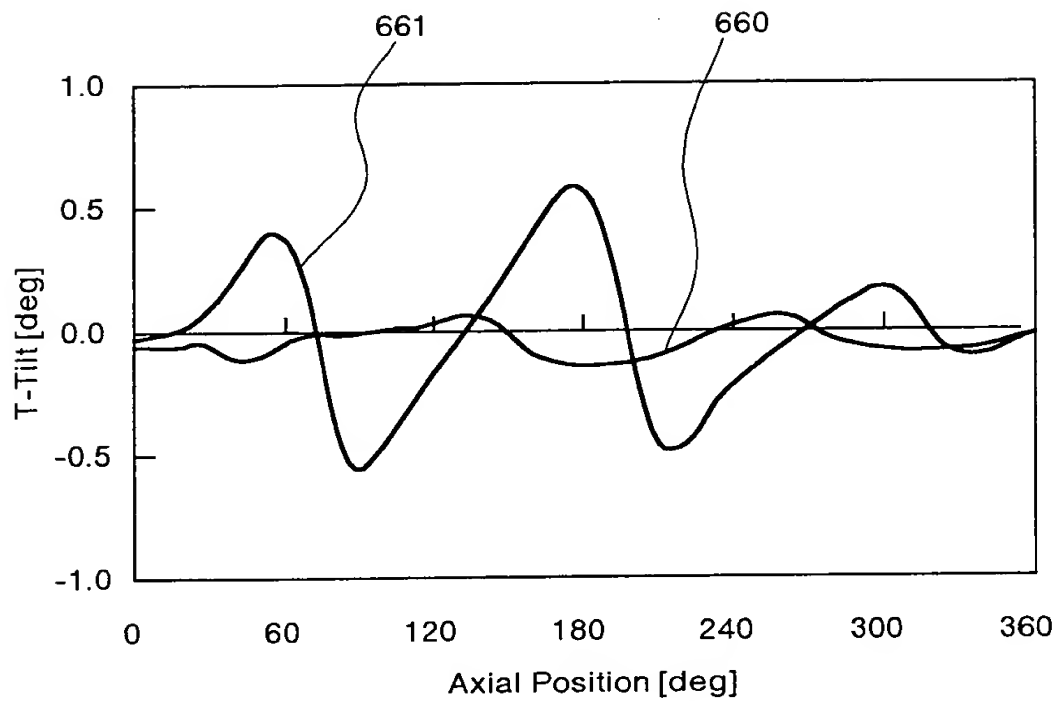


FIG.40

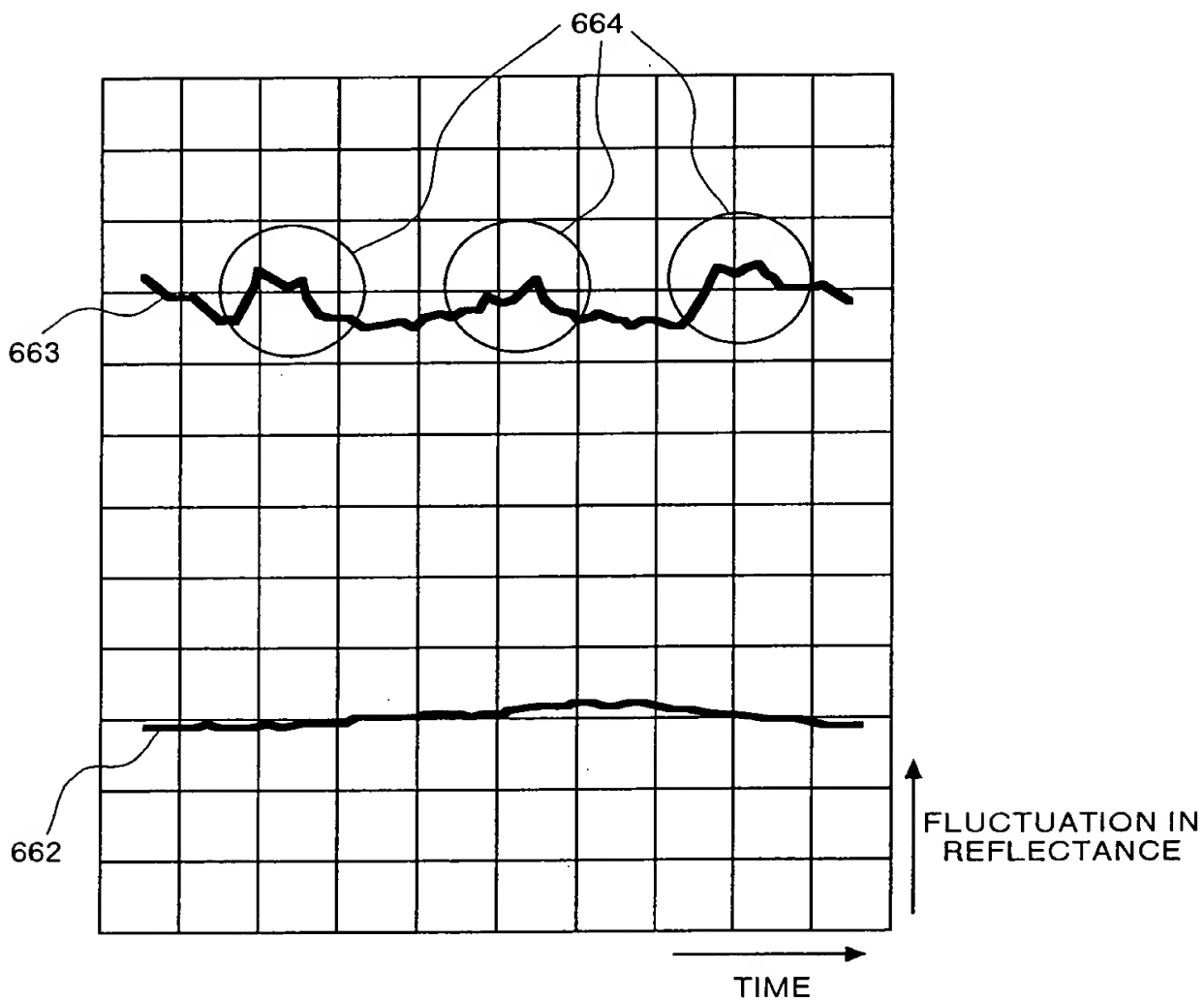


FIG.41

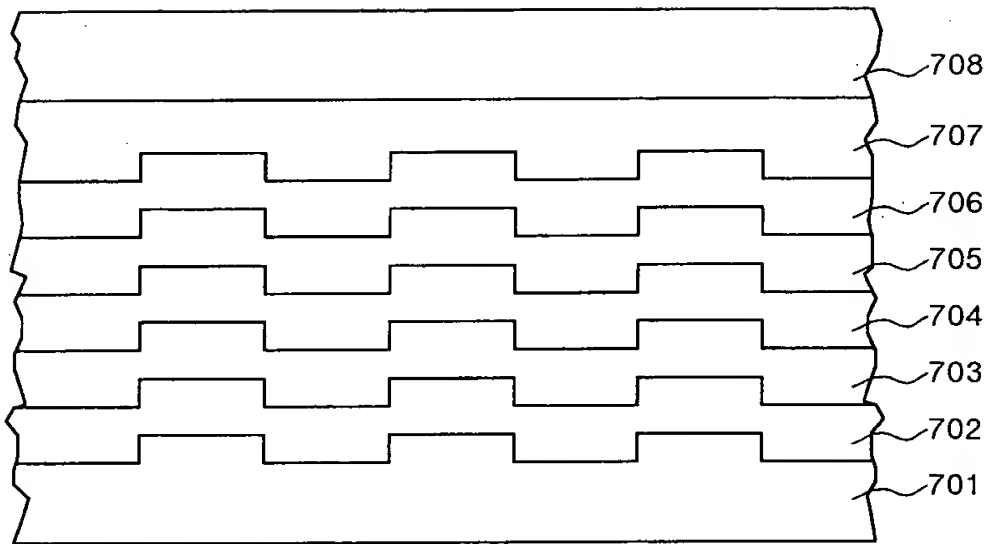


FIG.42

